

Board Meeting Minutes—139th Meeting

November 4, 2015

Board members present: Susan Brodahl, Ken Canon, Melissa Cribbins, Dan Enloe, Roger Hamilton, Lindsey Hardy, Debbie Kitchin, John Reynolds, Anne Root, Eddie Sherman, Warren Cook (special advisor, Oregon Department of Energy)

Board members absent: Heather Beusse Eberhardt, Mark Kendall, Alan Meyer, John Savage (OPUC *ex officio*)

Staff attending: Margie Harris, Ana Morel, Debbie Menashe, Amber Cole, Steve Lacey, Fred Gordon, Peter West, Courtney Wilton, Hannah Cruz, David McClelland, Betsy Kauffman, Jed Jorgensen, Jay Ward, Mike Bailey, Juliett Eck, Kim Crossman, Mia Hart, Scott Clark, Alison Ebbott, Thad Roth, Phil Degens, Jeni Hall, Matt Getchell, Lizzie Rubado, Chris Dearth, Sue Fletcher, Dan Rubado, Dave Moldal

Others attending: Jim Abrahamson (Cascade Natural Gas), Don Jones, Jr. (PacifiCorp), Anne Snyder-Grassman (Portland General Electric), Elaine Prause (Oregon Public Utility Commission), John Charles (Cascade Policy Institute), Scott Kenaston (Evergreen Consulting Group), Kari Greer (PacifiCorp), Ann Siqveland (OneEnergy Renewables)

Business Meeting

Debbie Kitchin called the meeting to order at 12:15 p.m. Reminder that consent agenda items can be changed to regular agenda items at any time.

General Public Comments

There were no public comments.

Consent Agenda

The consent agenda may be approved by a single motion, second and vote of the board. Any item on the consent agenda will be moved to the regular agenda upon the request from any member of the board.

MOTION: Approve consent agenda

Consent agenda includes:

- 1) September 30 Board meeting minutes
- 2) Amend Consent Agenda Procedure—R756
- 3) Amend Waste-to-Energy Policy—R757

RESOLUTION 756 AMEND CONSENT AGENDA PROCEDURE

WHEREAS:

1. In 2003, the board established a policy directing staff to identify non-controversial and routine items for inclusion in a consent agenda.
2. Staff was directed to err on the side of caution in that determination.
3. This policy, up for its regular three year review, was reviewed by the Policy Committee and is recommended for approval by the full Energy Trust board through the consent agenda at its next full board meeting.

It is therefore **RESOLVED** that the Board of Directors hereby amends the Energy Trust Consent Agenda Procedure as shown in Attachment 1:

ATTACHMENT 1

2.01.001-A Consent Agenda Procedure

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	November 5, 2003	Approved (R221)	11/2006
Policy Committee	October 19, 2006	Reviewed-no changes	11/2009
Policy Committee	October 23, 2012	Reveiwed-no changes	10/2015

That Energy Trust of Oregon, Inc., Board of Directors hereby approves the option of placing board action items on a consent agenda, according to the following guidelines:

- ~~Action items brought forward through the renewable energy open solicitation program will follow the process approved by the board specifically for that program.~~
- Written decision documents on consent agenda items will follow the same format and contain the same information as provided for regular agenda items.
- Where appropriate, consent agenda items will meet the following criteria:
 - Involve routine and non-controversial matters
 - Conform with a previously adopted board policy or implement a project previously approved by the board in a formal resolution
 - If an energy efficiency matter, involves a cost-effective action as documented by pertinent financial information, energy savings/production, or other outcomes
 - If a renewable energy matter, items will follow the process approved by the board specifically for that program
 - Can be accomplished within the board-approved budget with clearly specified budget authority
 - No board or public comment is anticipated regarding the proposed action
- If the consent agenda item authorizes an increase in expenditures under a previously existing contract, the resolution must include but not be limited to:
 - The original amount of the contract
 - The number and amount of prior increases
 - The amount of the current proposed increase
 - The reason for the increase, and
 - The resulting total contract amount
- The existing conflict of interest rules apply to votes of all items on the consent agenda.
- Any item on the consent agenda will be moved to the regular agenda upon request from any board member.

~~Moved by: Tom Foley Seconded by: John Klosterman~~

~~Vote: 6 in favor 0 opposed 0 abstained~~

~~Adopted on November 5, 2003 by Energy Trust of Oregon, Inc., Board of Directors.~~

RESOLUTION 757 AMEND WASTE-TO-ENERGY POLICY

WHEREAS:

1. Senate Bill 1149 defines "waste" as an eligible renewable resource.
2. In October 2006, Energy Trust established criteria and procedures to guide its decisions regarding funding for waste-to-energy projects, after it was endorsed by the Renewable Advisory Council.

- This policy, up for its regular three year review, was reviewed by the Policy Committee and is recommended for approval by the full Energy Trust board through the consent agenda at its next full board meeting.

It is therefore RESOLVED that the Board of Directors hereby amends the Energy Trust Waste-to-Energy Policy as shown in Attachment 1:

ATTACHMENT 1

4.24.000-P Waste-to-Energy Policy

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	November 8, 2006	Approved (R411)	November 2009
Policy Committee	November 17, 2009	No change	November 2012
Policy Committee	October 23, 2012	No change	October 2015

- Among waste-to-energy projects, Energy Trust will give top funding priority to those projects using organic or biological wastes from human, animal or plant sources.
- Among waste-to-energy projects, Energy Trust will give secondary funding priority to projects using wastes from manufacturing and industrial processes that are otherwise lost to commercial use, and that have no higher-value use than energy production. These projects will be considered as funds allow.
- Eligible projects may use *de minimus* quantities (provisionally, less than 1% of energy content) of petroleum-based materials.
- Energy Trust will prioritize waste-to-energy projects that meet the above criteria and: (a) do not use waste at the expense of a real, current alternative use with a higher social value, such as re-use or recycling; and (b) divert material from landfills, or otherwise avoid environmentally harmful waste disposal options.
- Waste-to-energy projects will be ~~part of the Biopower program, which will fund both waste and biomass projects from a single budget. All Biopower program procedures and policies will apply to waste-to-energy projects. In addition, reviewed by Renewable Energy Advisory Council review of waste-to-energy projects will be required before board action.~~

Moved by: John Reynolds
 Vote: In favor: 10
 Opposed: 0

Seconded by: Anne Root
 Abstained: 0

President's Report

Debbie Kitchin shared economic and market outlook highlights from recent conferences she attended. For example, population growth in Portland is increasing, though not as quickly as in 2006. Some other parts of the state have not seen as much growth or are only recently experiencing growth. Portland also saw a 3.2 percent employment increase since 2011, and increases in single-family and multifamily new construction permits. Portland is experiencing record low vacancy rates in the central business district, which includes the Lloyd District, central eastside, Pearl District, South Waterfront and downtown. The demand for office space is being fed by growth in high-tech, creative services and software businesses.

Debbie noted there was a 20 percent increase in the value of the trade-weighted dollar impacting U.S. exports. Slower growth in China is also impacting U.S. exports, including Oregon manufacturers. Capital

goods orders are stabilizing, which could have a dampening effect on manufacturing. It is forecasted that U.S. real gross domestic product growth in 2016 will be slightly slower than 2014.

Draft 2016 Annual Budget & Draft 2016-2017 Action Plan

Margie Harris, Peter West, Courtney Wilton

Margie thanked all staff involved in developing the draft budget and action plan.

The 2015 forecast was shared with the board. Results are looking strong, and the organization is solidly on course to fulfill the 2015 budget and action plan. Margie reviewed Energy Trust's cumulative results since 2002, including total revenue invested, participant utility bill savings, economic benefits and carbon dioxide emissions avoided.

The draft 2016 annual budget reflects sustained savings at fairly high levels, an increase in expenditures for customer incentives, low levelized costs in a year without a megaproject, high solar project volume and investments in other renewable energy technologies for future generation. The reserve balance will continue to decline and there is a request for a single full-time equivalent, FTE, position. It is projected the organization will come in below the OPUC minimum annual performance measure for program and administrative staffing costs. The action plan also furthers new efforts launched in 2014, such as the diversity initiative, restructuring the residential sector, internal process improvements, staff development and the executive director transition.

Margie reviewed the four building blocks Energy Trust uses when developing the annual budget and action plan. The building blocks include the current strategic plan; utility Integrated Resource Plans, IRP, and renewable energy resource assessments; market knowledge and context; and areas of emphasis specific to the coming year.

Next year's budget will be driven by capturing all cost-effective energy efficiency, serving high solar volume and investing in future other renewable energy projects, continuing to draw down reserves through 2016, managing internal costs through process improvements and staying open to new opportunities that may arise.

The draft budget proposes investing \$187.7 million to acquire 58.5 aMW and 5.7 million annual therms of savings and generation. Spending will be up from the \$170 million in the 2015 budget. The 10.5 percent increase is dominated by incentive spending and program delivery expenditures, while staffing and internal costs remain relatively flat compared to 2015.

The board asked how the organization will be positioned after 2016 given the planned reduction of reserves and increased spending in 2016. Will the organization need to request utility rate increases in 2017 or reduce future budgets? Margie responded that each utility is in a different and unique situation. The organization is spending down reserves at a faster rate than predicted. Rate adjustments are expected with some utilities, which would be done in the next one to two years to make sure any rate increases are measured.

The draft budget includes proposed revenues of \$152.8 million, an increase of 3.1 percent over the current year budget. The path to draw down program reserves over a three-year period starting with the current year budget is now predicted to be complete in two years, due to high economic growth driving large project volumes.

The single largest change is in incentive spending, responsible for 75 percent of the anticipated increase in 2016 expenditures. Incentive spending will go up 14.2 percent compared to the current year and will equal approximately 57 percent of total expenditures.

The board noted revenue for renewable energy is \$14.5 million while expenditures are \$20.6 million. Margie clarified that the difference is made up from reserves, and payments will also be made on commitments for some renewable energy projects completed in prior years.

The board asked whether spending three times more on external program delivery is typical. Margie noted this percentage of spending has been stable since the Production Efficiency program was brought in-house.

Peter provided detail on the sources of savings, expenditures and activities by program.

The board asked for more details on the measure analysis conducted by Planning, and why it was unusually high this year. Peter provided an example of a new technology, like smart thermostats, and the need to conduct engineering analysis to determine projected savings and whether they will be sustained savings, as well as market and behavioral analysis to determine demand for the measure at an affordable cost for all ratepayers. Another change in the budget is shifting the avoided cost to be weighted more toward peak demand. Third, with lower gas prices and a shift to time-of-day avoided costs, more measures are on the line for cost-effectiveness, meaning Energy Trust activity needs to go deeper or programs need to implement new pilots to achieve similar levels of savings.

The budget proposes a natural gas savings goal of 5.7 million annual therms at 34.1 cents per therm levelized. The savings goal is a decrease of about 3.2 percent due to serving more customers and completing more projects that are smaller in scope. Peter described the trend of more projects but fewer savings. The programs now need to drive deeper into markets and the key is stopping before actions are no longer cost effective. A large share of residential gas savings are expected from new home construction and the New Buildings program has a pipeline larger than ever before.

Existing commercial and industrial buildings are expected to see steady activity in 2016. A large piece of the incentive increase on the gas side has to do with Existing Buildings and Existing Multifamily. There is an erosion for customers in the value of doing projects because the payback for capital stand-alone measures is more than six years. Businesses are more comfortable with a payback of five years or less. In response and to re-establish activity, incentives will be increased. Peter noted the gas portfolio includes gas market transformation activities supported regionally through NEEA and savings will likely not show for some time as the program gears up.

The board asked what the pie chart on slide 14 would look like if the Existing Homes measures that are on the cost-effectiveness margin were to be removed. Staff will bring back the exact numbers for the board. Peter said the removal of those measures will not affect the overall picture very much as these measures and corresponding savings have been tailing off for a few years. In addition, the OPUC cost-effectiveness exceptions for single-family homes are no longer a large piece of the budget. The board discussed looking at the numbers and seeing if Energy Trust should walk away completely from those measures.

The board asked what the sources of savings are for Production Efficiency. Peter said the Production Efficiency program serves any industrial or agricultural business. There are greater electric savings than gas as a percentage of the whole due to electric savings from lighting measures in industrial facilities and buildings.

The board asked for more detail on the shift from Strategic Energy Management, SEM, savings to capital project savings, and whether the improved economy is causing some of that shift. Peter responded that improved cash flow and greater comfort with longer payback periods has improved demand for capital projects. SEM is both a savings and an engagement strategy for the organization, contributing operations and maintenance savings and continuing the engagement with customers as they consider capital improvements.

The budget proposes an electric savings goal of 55.7 average megawatts at 2.9 cents per kilowatt hour levelized. The savings goal is an increase of 4.8 percent over the current year largely due to increased savings from the Northwest Energy Efficiency Alliance.

The budget proposes renewable energy generation of 2.84 aMW, 18 percent less generation than the 2015 budget. Nearly all generation will be from standard and custom solar projects. This is part of the cycle of renewable energy project investments.

The board asked what is being supported for the \$5.8 million in expenditures for Other Renewables. Peter answered the expenditures are for one project that will come online and also milestone payments for already completed projects or projects in progress that will begin generating after 2016. The board recommended providing more explanation to that point on slide 17 to distinguish annual costs from annual benefits.

Peter reviewed the savings and generation by utility.

Peter clarified the levelized costs for NW Natural in Washington are higher than the levelized costs for NW Natural in Oregon because there is no industrial program offered in Washington.

The board asked how the organization will be in relation to the strategic plan goals when 2016 projected achievements are included. Peter noted the organization will be slightly ahead of where it needs to be to meet the five-year strategic plan goals.

Margie reviewed the four main areas of emphasis in the action plan: managing transition, emerging technologies and approaches, expanding participation, and efficient and effective operations.

Managing transition relates to program design changes, exploring advantages of more upstream measures at retail locations, expanding outreach to more and different kinds of customers to sustain volume, and targeting smaller multifamily customers throughout the state. Managing transition also includes readiness for the future, such as policy changes on the horizon from federal Clean Power Plan compliance or potential legislative proposals from the 2016 or 2017 state legislative sessions. Preparing staff for the future through the diversity and staff development initiatives, and planning for and transitioning to a new executive director round out the managing transition area of emphasis.

Emerging technologies and approaches includes a potential PGE demand response pilot, which will explore the intersection between energy efficiency and demand response.

Expanding participation includes completing an in-house research study on where participation is strong and what the opportunities are to go deeper or fill participation gaps. This area of emphasis also includes an increase in the number and engagement of commercial trade allies, and investing in them as a sales force. Energy Trust will continue to offer pre-packaged solutions for new construction, as well as pursue ongoing collaboration on customer outreach and customer service with utilities.

Efficient and effective operations is a piece of the strategic plan and was also identified as part of the 2014 Management Review. In 2015, staff identified four core processes and developed corresponding metrics for improvements to the procurement process, project tracking system, customer information and services, and incentive processing. Year-end incentive changes and expediting measure analyses will be taken up in 2016.

The draft budget proposes one new full-time equivalent position. This individual will work on program delivery, project tracking, data entry and incentive processing for the renewable energy sector and the commercial SEM initiative. This is the fewest annual FTE ever requested, and at a time when Energy

Trust is seeing workload pressure from growth in activity, project volume and incentive processing. With the additional FTE, staffing costs as a percentage of total expenditures will remain well below the OPUC annual minimum performance measure of 7.75 percent. If the FTE is approved, Energy Trust will have 105 FTE.

The board thanked staff for the presentation and summary, noting it was well written and clear in the summary and use of graphics. The board noted that before or at the May 2016 strategic planning workshop, more information and discussion will be needed on the 2017 budget makeup once reserves are drawn down.

The board took a break from 1:52 p.m. to 2:05 p.m.

Energy Programs

Authorize funds for Ewauna 2 Solar Project, David McClelland

Staff is seeking board authorization for an \$850,000 custom incentive for a 2.9-MW solar project outside Klamath Falls. The Ewauna 2 project is a result of a competitive request for proposals, RFP, for custom solar projects in Pacific Power territory last spring. Energy Trust received 16 applications adding up to \$14.6 million in incentives requested for the available \$2 million. Of those, 14 projects were screened out for not meeting RFP requirements, particularly for above market costs.

As background prior to reviewing the project financial detail, Dave provided information on qualifying facilities and recent rate changes at the Oregon Public Utility Commission, OPUC. This impacted projects submitting requests for incentives to Energy Trust through the RFP. For instance, five projects secured the 2012 power rate and had no above-market costs. The Ewauna 2 project secured the lower 2014 power rate.

Dave reviewed the project details for the Ewauna 2 project, and noted generation from the system will be about 8 percent of Energy Trust's five-year strategic plan goal of 10 aMW. The developer is OneEnergy Renewables, which also is the developer for the nearly completed Steel Bridge project previously supported by Energy Trust.

Dave noted the single-axis trackers on the system have become very commonplace for utility-scale projects, and most large projects in Southern Oregon now include trackers. Single-axis trackers are relatively simple compared to dual-axis trackers. Staff will follow up with the board on how much, if any, single-axis trackers add to the project's operations and maintenance costs.

The board requested to have the table "Ewauna Solar 2 financial model" on slide seven in the board packet briefing papers going forward.

The board asked why the Ewauna 2 project is cheaper than the Steel Bridge project, which does not have trackers. Dave noted that costs in the solar market have been coming down significantly in the short timeframe between the two projects requesting incentives. Several developers who responded to the RFP had similar costs as Ewauna 2.

The board asked what was appealing about the Klamath Falls location. Dave noted this will be Energy Trust's first large-scale solar system in Klamath Falls. For the developer, it was a combination of the right mix of available land, proximity to a substation for ease of interconnection and proximity to an electric load from the city. Ann Sigveland from OneEnergy Renewables confirmed those details, describing the high production profile of Klamath Falls, the site's vicinity to an interconnection grid and a more urban center, and the zoning of the land as heavy industrial.

Dave reviewed the solar qualifying facility rate schedule and how it was applied to this project. For the first time for Energy Trust, a project will be operating under three different rate periods: a renewables sufficiency period from 2017-2023, a renewables deficiency period from 2024-2032, and from 2033 and beyond the project will not have a contract with Pacific Power and the rate is assumed to be the market rate. One implication is during the renewables deficiency period, Pacific Power will also be receiving renewable energy certificates, RECs, from the project. In response, Energy Trust's share of RECs will be adjusted.

Dave summarized the strengths of the project, which includes an experienced developer, experienced installer and experienced owner/operator. OneEnergy Renewables has a solid business plan with a number of key milestones, some of which have already been met. Ewauna 2 is also the lowest-cost solar project Energy Trust has supported through a competitive process.

The board asked whether Energy Trust has any interest in the RECs the project plans to retain and sell. Dave said the project will keep the first five years of RECs, allowing them to market and sell the RECs and cover additional above-market costs. Because Energy Trust is not covering 100 percent of the above-market costs, it is appropriate not to require receiving all the RECs.

Margie asked if the renewables sufficiency and deficiency rates going forward will be the same. Dave said once a contract is signed, the rates are locked in for 15 years.

**RESOLUTION 758
AUTHORIZING FUNDS FOR EWAUNA 2 SOLAR PROJECT**

WHEREAS:

- 1. Consistent with Energy Trust's 2015-2019 Strategic Plan, Energy Trust supports all eligible renewable energy technologies using competitive approaches to identify and fund new projects and market solutions for those projects receiving non-standard incentives.**
- 2. In addition, the Oregon Public Utility Commission's (OPUC's) fourth funding priority for renewables for Energy Trust to support the above-market costs associated with innovative and custom solar projects, "as funds are available."**
- 3. In early-2015, Staff identified \$2,000,000 in available funds for innovative and custom solar projects in Pacific Power territory, funds unallocated after a 2015 "Other Renewables" RFP process and support of standard solar projects.**
- 4. In March 2015, Energy Trust released a Request for Proposals for innovative and custom solar projects in Pacific Power territory, and sixteen applications were received and reviewed.**
- 5. Evaluating the proposed projects for readiness and above-market cost, Energy Trust staff recommends moving forward with Ewauna 2 Solar: a 2.9 MW_{AC} project, ground mounted, with single-axis trackers to boost generation approximately 25% over a fixed tilt system. The project will be located on the south side of Klamath Falls, in Oregon on leased land zoned for industrial use and currently used for grazing. This project proposal demonstrated many strengths.**
- 6. This project has a solid business plan, executed 26-year lease, experienced developer, construction contractor, and owner, and executed power purchase agreement (PPA) and interconnection agreement.**
- 7. Total project cost is estimated to be approximately \$7,166,000, which Energy Trust staff considers reasonable for a project of this size and design, at \$1.95/ W_{DC}, comparing favorably to the recent Steel Bridge Solar project at \$1.98/W_{DC}.**

8. **Netting out Pacific Power's contribution towards the above-market cost of the project through its above-market QF rate pursuant to the project's executed PPA, the remaining above-market cost on a net-present value basis over 20 years is estimated at 1,415,000.**
9. **Based on its analysis of above-market cost and available incentive funding for projects of this type, staff recommends an Energy Trust incentive of up to \$850,000.**
10. **In consideration for its incentive funding contribution, Energy Trust will require that the project owner assign up to 48 percent of the Renewable Energy Certificates (RECs) for the project to Pacific Power for compliance with Oregon's solar mandate and renewable energy requirements.**

It is therefore **RESOLVED** that the board of directors of Energy Trust of Oregon, Inc. authorizes:

1. **An incentive of up to \$850,000, payable in not less than two increments, for the Ewauna 2 ground-mounted solar project in Klamath Falls, Oregon with minimum capacity of 2.9 MW_{AC} and expected generation of 7,246 MWh/year (0.83 aMW).**
2. **Energy Trust to require the project owner to deliver up to 48% of all RECs from this project to Pacific Power for the benefit of its ratepayers and for compliance with Pacific Power's renewable energy generation and solar capacity obligations to the state, recognizing that through the project's PPA, the project is also providing additional RECs directly to Pacific Power such that Pacific Power will be receiving a total of approximately 78% of the RECs from the project.**
3. **The executive director or her designee to negotiate and sign an agreement consistent with this resolution.**

Moved by: John Reynolds
 Vote: In favor: 10
 Opposed: 0

Seconded by: Ken Canon
 Abstained: 0

Committee Reports

Executive Director Transition Committee, Ken Canon

The board met in executive session today. The committee is drafting an opportunity announcement to send out in January to start the solicitation process for applicants. The committee will start working on the details of the candidate application.

Evaluation Committee, Susan Brodahl

The committee reviewed findings of the air sealing pilot, which tested whether combining the measure with attic insulation improved its cost-effectiveness. The committee received a presentation on solar system soft costs. The Solar program is trying to determine the baseline of non-hardware costs. A qualitative market research study was completed for commercial trade allies. A qualitative market research study was completed for small manufacturers and how to better serve them. An evaluation of an efficiency sales training conducted in February 2014 showed respondents reporting they made changes to their sales approach as a result of the training.

Finance Committee, Dan Enloe

Dan provided highlights of the September 2015 financial statements, noting reserves have been drawn down as planned and pointed to the change in PGE's reserves over last year.

Spending so far this year is \$2.5 million below budget, about a 2 percent variance, and spending this year is 16 percent higher than last year. Energy Trust has spent \$11.5 million more on incentives this year than last year. Revenue from investments, which are conservatively invested, brought in a small

amount. It remains to be seen whether the attempt to minimize the impact of the year-end “hockey stick” was effective or Energy Trust is seeing more activity overall.

Policy Committee, Roger Hamilton

The committee approved a new member to the Conservation Advisory Council, Tyler Pepple, a partner at Davison Van Cleve, P.C. The law firm represents the Industrial Customers of Northwest Utilities.

Amend Renewable Energy Certificate Policy, Jed Jorgensen

Jed provided a brief background on renewable energy certificates, RECs, similar to the content the board heard a few meetings prior. One REC is one MWh of renewable energy that is a tradeable commodity. It represents all the green or environmental benefits derived from electricity produced by 1 MWh of renewable energy. There are two markets for RECs, a compliance market and a voluntary market. Oregon uses the compliance market for utility compliance with the state’s Renewable Portfolio Standard. So far, PGE has enough RECs to meet its compliance obligation through 2020 and Pacific Power through 2024. Jed noted this is what is driving the sufficiency and deficiency rates Dave McClelland referenced during the Ewauna 2 project presentation. The voluntary market is for transactions made by households or businesses looking to make a green claim, such as “powered by renewable energy.” Once a REC has been used to make a claim, either for RPS compliance or a voluntary claim, it is retired.

Jed described the origination of Energy Trust’s REC policy, which is based on the renewable energy programs contributing to growth in renewable energy in Oregon. RECs are one of the many valuable results of investing in renewable energy resources. SB 1149 does not mention RECs because there was no REC market at the time the law was passed. As the REC market emerged, Energy Trust began asking for a portion of REC ownership when supporting a project because ratepayers were paying for all or a portion of the above-market costs of the project. Ratepayers are entitled to benefits of that investment, including RECs. In 2004, following discussions with the Renewable Energy Advisory Council, OPUC and board, the board established a REC policy. The policy sets principles on viewing RECs, ownership of RECs, calculating RECs and determining when we need to own them.

The REC policy came up for review 18 months ago. At that time, staff talked with the Policy Committee about doing a robust study since the REC market had evolved significantly since the policy was first written. Energy Trust worked with Bonneville Environmental Foundation, BEF, on the report. It provides an overview of REC markets, Energy Trust REC holdings and how Energy Trust participates in the compliance and voluntary markets. The report also reviewed pain points and the goals of implementing the policy. The main goal is to get RECs into the Western Renewable Energy Generation Information System, WREGIS, so utilities can use them for RPS compliance. Staff brought proposals to the board, Renewable Energy Advisory Council and utilities based on the report findings.

Jed reviewed the amendments to the REC policy. He noted it was rewritten for clarity with two substantive changes to bring rationality and process to the way staff implements the policy.

The board discussed the proposed policy changes. It was noted the WREGIS registration process is far too complex and expensive for small residential solar systems, and it would be a large financial loss for Energy Trust to follow the WREGIS process on those small systems. The board agreed the reason for the registry is to ensure validation of the REC and to avoid double counting or potential abuses to the system. It was noted if a REC isn’t registered in WREGIS, it can’t be used toward utility RPS compliance.

Staff clarified the WREGIS registration issues are for small net-metered solar projects only, not large renewable energy systems.

Staff said prior to these proposed policy changes, Energy Trust did not have a way to look at the REC market and incorporate current market conditions and knowledge into what the program is doing. The annual board review gives Energy Trust this chance to review and incorporate any market changes.

The board asked what the opportunities are for Energy Trust to have RECs on the open market. Jed said the current policy prohibits Energy Trust from selling RECs. If the policy changed, and Energy Trust sold RECs on the voluntary market, the current value of a REC ranges from less than one dollar to maybe a few dollars. Energy Trust's annual portfolio right now is about 125,000 RECs. In WREGIS, the RECs would not be sold, they would be registered, like a bank, allowing the transaction to happen for utility RPS compliance.

Public comment

John Charles, Cascade Policy Institute, provided public comment to present an alternative path forward for consideration by the board. He suggested Energy Trust exit the REC market, liquidate the existing portfolio of RECs over a period of years, and deliver the renewable energy programs as specifically written in statute. He noted RECs are not mentioned in Energy Trust's enabling legislation, SB 1149. Energy Trust is authorized to promote renewable energy and a REC is an intangible commodity that does not generate power. He said REC buying has been a mission creep for Energy Trust. He said SB 1149 does not authorize Energy Trust to work on greenhouse gas reduction, and RECs are directly related to minimizing carbon dioxide emissions. He said if greenhouse gas reduction is not a part of the statutory mission, Energy Trust should not be involved in REC markets. He noted that according to the BEF report completed last spring, key criteria for a renewable energy source to have a REC is the electricity production should not result in any other negative environmental impacts. He said Energy Trust is supporting renewable energy resources, solar and wind mostly, that have low capacity factors, meaning the grid needs spinning reserve. Depending on what's in the spinning reserve mix, it would equal or exceed the environmental impacts of the renewable energy resource. He said that RECs from intermittent sources are fake and fraudulent. Lastly, he said the independent auditors of Energy Trust's financial statements in 2012 noted all current and future RECs have a value of zero dollars as of December 31, 2011, and from then on, audits do not reflect any value of RECs.

Debbie Menashe noted a change to be made to Resolution 759, under the second "Whereas" clause. The language starting at section c is a remnant of the previous policy and should be removed.

AMENDED RESOLUTION 759

AMEND ENERGY TRUST RENEWABLE ENERGY CERTIFICATE POLICY

WHEREAS:

1. RECs represent renewable energy values that should be protected for ratepayers in Energy Trust programs.
2. In protecting this value, Energy Trust recognizes that: (a) there may be circumstances in which the cost of registering RECs in WREGIS is prohibitive; **and** (b) Energy Trust's REC share should be coordinated with utility green-power programs and rate processes; ~~and (c) owners of custom projects may keep RECs to meet environmental or "green" goals if the owner provides substitute RECs meeting certain requirements aimed at protecting ratepayers represented by Energy Trust.~~
3. These principles should be incorporated in Energy Trust policy.
4. This policy, up for its regular three year review, was reviewed by the Policy Committee and is recommended for approval by the full Energy Trust board through the consent agenda at its next fully board meeting.

It is therefore RESOLVED that the Board of Directors hereby amends the Energy Trust REC policy as shown in Attachment 1, to:

1. Allow Energy Trust not to register RECs in the Western Renewable Energy Generation Information System (WREGIS) where the board concludes the effort and expense are disproportionate to the REC market value;

2. **Coordinate policy with utility green-power programs and rate processes by reducing Energy Trust’s share of RECs to the extent that a utility retains RECs for the benefit of its ratepayers via a green power granting program or power purchase agreement; and,**
3. **Adopt minor changes, primarily in section 2 “Ownership,” clarifying policy mechanics.**

ATTACHMENT 1

4.15.000-P Renewable Energy Certificate (REC) Policy

History			
Source	Date	Action/Notes	Next Review Date
Board Decision	March 3, 2004	Approved (R256)	February 2005
Board Decision	February 16, 2005 (residential tags)	Amended (R313)	
Board Decision	April 6, 2005	Rescind R313	February 2008
Board Decision	March 28, 2007	Amended R433	February 2010
Policy Committee	October 12, 2010	Reviewed, no changes	October 2013
Board Decision	May 4, 2011	Amended R584	May 2014

PRINCIPLES

The following principles should guide Energy Trust’s ownership of renewable energy certificates (RECs) generated by renewable resources:

- RECs generated by renewable energy are one of the multiple values for Oregonians provided through investing in renewable resources.
- Energy Trust RECs should be used for the long-term benefit of customers of Pacific Power and Portland General Electric, as long as the effort and expense associated with registering them is not disproportionate to their value.
- The disposition (retention, transfer) of RECs will coordinate with and further the goals of Energy Trust, state policies and regulatory requirements.
- Where Energy Trust takes ownership of RECs, its ownership should reflect both the REC value and the support provided by Energy Trust.
- Energy Trust should coordinate its REC policy with utility green power programs and rate processes.
- Energy Trust ownership of RECs and the mode of delivery of RECs to Energy Trust should be flexible over time, while reinforcing incentives for long-term project performance.

POLICY

1. Annual Board Review

- Energy Trust will ascertain market values and forward price curves for relevant types of RECs and update them periodically.
- In order to ascertain market values and forward prices curves for relevant types of RECs, Energy Trust will consult with PGE, Pacific Power and the OPUC staff and will give consideration to federal and state policies that may affect such values and forward price curves.
- Energy Trust will track the cost and effort involved in registering RECs and report it to the RAC and the board at least annually, and where the market value of any given REC category is less than the cost of registering them, recommend whether to continue to register them in WREGIS.
- Where the board determines, after RAC review, that the cost and effort entailed in registering RECs of a given type is disproportionate to the market and other values associated with RECs, the board may authorize staff to take title to the RECs without registering them in WREGIS and shall effectuate such authority by board resolution.

2. Ownership

- Where the board determines that Energy Trust should secure RECs for the benefit of ratepayers, the quantity of RECs for which Energy Trust will take ownership rights will be based on the ratio between Energy Trust's incentive and above-market cost, with an adjustment in cases where the REC market value exceeds the per-REC value of the incentive, determined as follows:
 - Step 1: Multiply the number of RECs that would be generated by a project over the term of the funding agreement with Energy Trust by the percentage of the above-market cost represented by Energy Trust's incentive.
 - Step 2: Divide the incentive amount by the quantity of RECs calculated in Step 1.
 - Step 3: Compare the per-REC value of Energy Trust's incentive to the REC market value ascertained in Section 1 of this policy.
 - Step 4: If the per-REC value of the incentive exceeds the per-REC market value, Energy Trust will take the full amount of RECs calculated in Step 1. If, however, the per-REC market value exceeds the per-REC incentive value, Energy Trust will reduce its REC ownership so that the per-REC incentive value is equivalent to the per-REC market value.
- Energy Trust will reduce its ownership of RECs to the extent that a utility retains RECs for the benefit of its ratepayers pursuant to the utility's green power program or power purchase agreements.

3. Delivery of RECs

- Unless the Energy Trust board determines under Section 1 that a type of REC need not be registered in WREGIS, RECs should be delivered to a utility WREGIS account specified by Energy Trust.
- Energy Trust may agree to up-front retention of RECs by a developer or project owner if there are contractual assurances that future RECs will revert to Energy Trust.

Vote on amending resolution language to remove 2.c. from "Whereas" section

Moved by: John Reynolds

Seconded by: Anne Root

Vote: In favor: 9

Abstained: 1, Dan Enloe, no explanation provided

Opposed: 0

Vote on resolution, as amended

Moved by: John Reynolds

Seconded by: Roger Hamilton

Vote: In favor: 9

Abstained: 1, Dan Enloe, no explanation provided

Opposed: 0

Now that the board has approved the policy changes, staff will move into policy implementation. Implementation strategies will start with a staff and Policy Committee discussion on REC value and registration costs. The value of a REC on the voluntary market is currently low, and both PGE and Pacific Power are in compliance with the RPS through 2020 and 2022, respectively. Jed noted that as the percentage of renewable energy needed for compliance grows in the out-years, Energy Trust's portion of the overall RECs will get smaller.

Jed described the administrative cost and effort to register a REC with WREGIS for compliance purposes. All systems need to be metered and metered generation reported electronically. Energy Trust must also have an account with WREGIS to assign the metered generation to the account. Because of this process, REC registration costs for the standard Solar program are high while it varies for Other Renewables and custom solar projects. Also, for small, net-metered systems, each system currently has a generation meter, but it cannot be read remotely. It would be cost prohibitive to manually read the

meters, and the cost to retrofit them is too expensive. For the 8,000 systems Energy Trust has supported, it would cost more than \$7 million to install digital meters.

In response, staff proposes to require REC registration in WREGIS for Other Renewables and custom solar systems except where neither the utility nor the customer wants to register them. This is largely small wind and ranch-scale hydropower systems, about 125,000 RECs annually. Also, for standard solar systems, staff proposes not registering the RECs until a cost-effective methodology is created. This is about 30,000 RECs annually or 25 percent of the annual portfolio. In addition, the Solar program will stop requiring separate generation meters for standard solar systems as inverter technology has evolved to also include generation meter capability. Staff will draft these proposals into a report for the Policy Committee's review.

The board discussed whether the decision on the generation meter is a board-level decision. Staff clarified it was provided as information that will be included in the annual board review of the REC policy moving forward. Metering is key to allowing a project to be registered in WREGIS, intersecting with the REC policy.

The board supported the next steps.

Strategic Planning Committee, Debbie Menashe

Debbie Menashe provided an update in Mark Kendall's absence. At the most recent committee meeting, the committee started planning topics for the board's May 2016 strategic planning workshop and reviewed staff proposals related to measuring progress for certain strategies in the 2015-2019 Strategic Plan. Staff provided an update about a paper that will guide a report back to the board in May on establishing metrics for key internal process areas at Energy Trust. The committee also reviewed a revised staff proposal for Emerging Tech metrics for electric technologies. It was noted the label Emerging Tech was replaced with Emerging Efficiency Resource to more clearly describe all the options available to Energy Trust to replenish the energy efficiency resource. Lastly, the committee received an update on establishing a baseline for the Expand Participation strategy.

Staff Report

Highlights, Margie Harris

Margie provided highlights from two recent ribbon-cutting events unveiling new hydroelectric turbines, acknowledging long-term irrigation district modernization improvements completed at Three Sisters Irrigation District in Bend and Farmers Irrigation District in Hood River.

Margie noted the American Council for an Energy-Efficient Economy, ACEEE, released its annual state rankings of the most energy-efficient states. Oregon was ranked fourth in the nation.

Margie also provided an update on a recent Northwest Energy Efficiency Leadership Summit she attended earlier in the week.

Adjourn

The meeting adjourned at 3:47 p.m.

The next regular meeting of the Energy Trust Board of Directors will be held Friday, December 11, 2015, at 12:15 p.m. at Energy Trust of Oregon, Inc., 421 SW Oak Street, Suite 300, Portland, Oregon.

/S/ Alan Meyer
Alan Meyer, Secretary